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WESTERN AUSTRALIA.

REPORT

OF THE

PUBLIC HEALTH DEPARTMENT

FOR THE

YEARS 1931 AND 1932.

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Report of the Public Health Department.

The Honourable Minister of Public Health.

I have the honour to submit herewith the Annual Report of the Health Department for the two years 1931 and 1932.

FINANCIAL.

STATEMENT OF REVENUE AND EXPENDITURE.

Revenue.

——	Calendar Year, 1931.			Calendar Year, 1932.		
	£	s.	d.	£	s.	d.
License Fees	277	7	6	234	2	9
Meat Inspection Fees	4,942	1	4	4,950	17	9
" Village Area " Sanitary Contracts	174	7	7	134	6	10
Pathological Laboratory	511	1	9	427	1	6
Sanitation Refunds	121	14	11	127	18	5
Commonwealth Subsidy on Expenditure *re* Venereal Disease	...			...		
Miscellaneous	655	17	9	915	2	2
	6,682	10	10	6,789	9	5

Expenditure.

	Calendar Year, 1931.			Calendar Year, 1932.		
Salaries	12,277	16	10	10,135	1	9
" Village Area " Sanitation	64	10	10	48	12	0
Payment Local Health Authorities	769	0	9	2,059	4	0
School Hygiene	575	1	1	430	5	5
Travelling and Transport	323	4	7	375	9	11
Postage and Telephones	153	12	3	265	7	10
Laboratory	116	8	9	127	10	11
Venereal Diseases	2,510	1	2	2,232	19	8
Miscellaneous	1,391	3	4	1,067	7	1
Infant Welfare Centres	1,606	12	6	1,045	0	0
Transport of Lepers	54	6	0	510	9	0
Medical Officer and School Dentist Travelling Allowances	...			149	10	0
Total, Public Health	19,841	18	1	18,446	17	7
Sanitation of Government Buildings—						
Wages	172	0	4	193	17	3
Sanitary Charges	11,681	15	9	9,435	15	6
Total, Government Sanitation	11,853	16	1	9,629	12	9
Total, Public Health Branch	£31,695	14	2	£28,076	10	4
Psychological Clinic—						
Salaries	222	11	11	...		
Incidental	7	5	0	...		
	£229	16	11	*Nil*		

VITAL STATISTICS.

Western Australia.

——	1930.	1931.	1932.
Mean Population—			
Males	226,321	225,806	225,655
Females	192,306	194,988	196,781
Total	418,627	420,794	422,426
Births—			
Males	4,827	4,428	4,122
Females	4,373	4,121	3,843
Total	9,200	8,549	7,965
Birthrate—			
Per thousand of population	22·0	20·32	18·85
Deaths—			
Males	2,348	2,376	2,305
Females	1,426	1,305	1,410
Total	3,774	3,681	3,715
Death Rate—			
Per thousand of population	9·0	8·75	8·79
Natural Increases—			
Rate per thousand of population	13·0	11·57	10·06
*Infantile Mortality per thousand Births—			
Metropolitan Area	51·9	46·17	47·52
Rest of State	47·20	37·79	42·31
Whole State	46·7	41·53	44·57

* Excluding Still-births.

BIRTH, DEATH, AND INFANTILE MORTALITY RATES AND NUMBER OF STILL-BIRTHS, 1923–1932.

——	Birth Rate.	Death Rate.	Infantile Mortality.*			Still-births.	
			Whole State.	Metropolitan Area.	Rest of State.	Whole State.	Metropolitan Area.
1923	22·6	8·4	56·2	61·7	49·9	222	110
1924	23·1	9·1	49·9	61·5	41·6	251	105
1925	22·2	9·0	56·8	72·5	45·6	264	120
1926	22·1	8·9	49·3	58·9	42·3	228	91
1927	22·0	8·8	45·9	57·5	37·01	214	122
1928	21·8	9·1	48·1	60·6	38·3	273	141
1929	22·0	9·6	56·1	65·4	48·4	253	130
1930	22·0	9·0	46·7	51·9	47·2	255	136
1931	20·3	8·8	41·5	46·2	37·8	217	107
1932	18·9	8·8	44·6	47·5	42·3	192	94

* Exclusive of Still-births.

COMPARISON OF INFANT MORTALITY AND GENERAL DEATH RATE.

——	Infant Mortality.			General Death Rate.		
	1930.	1931.	1932.	1930.	1931.	1932.
New Zealand	34·48	32·54	31·32	8·56	8·34	8·02
Western Australia ...	46·74	41·53	44·57	9·02	8·75	8·79
New South Wales ...	49·84	43·52	41·06	8·53	8·48	8·44
Victoria	46·61	44·47	43·00	8·94	9·48	9·30
Queensland	39·97	36·56	40·25	7·93	7·86	8·05
Tasmania	50·56	45·99	41·20	9·0	9·35	9·12
South Australia	48·38	36·35	36·62	8·35	8·38	8·46

VITAL STATISTICS.

General Death Rate.

Reference to the tables will show a distinct reduction in the general death rate for both 1931 and 1932, as compared with the year 1930 and previous years. The comparative figures with other States of the Commonwealth and New Zealand are also shown.

Infant Mortality.

The infant mortality, that is, deaths per thousand births under one year of age, also shows a distinct improvement, being respectively for 1931 and 1932, 41.53 and 44.57 as against 46.74 in 1930 and 56.13 in 1929. The figure for 1932 is, however, the highest in the Commonwealth, though low by comparison with previous years.

New Zealand still holds pride of place in this regard, by a considerable margin.

There is a distinct fall in the birth-rate during the period under review, doubtless due to the financial depression.

INFECTIOUS DISEASES.

Typhoid Fever.

Probably no disease has shown such a marked progressive fall in incidence as typhoid fever in this State, and the two years under review are conspicuous in that they have eclipsed the previous lowest record of 1930. Deaths recorded from this disease were in 1931 only 8 and in 1932, 3. The cases were widely distributed in the State, the only suggestion of a localised epidemic occurring at Boulder in the first quarter of 1932, when five cases were notified.

Dysentry.

Of this disease 13 cases were recorded in 1931 and 14 in 1932 as against 25 in 1930. Most cases were of the bacillary type.

Diarrhœa and Enteritis.

Deaths only of this disease are recorded, cases not being notifiable to health authorities.

It is interesting and most satisfactory to note, for the two years under review, a marked fall in the mortality from this disease, there having occurred only 36 deaths under one year of age in 1931 and 43 in 1932. These figures are the lowest recorded and represent approximately a 50 per cent. reduction on the three previous years.

It would appear that from being one of the most potent causes of infant mortality, this disease is becoming less and less destructive of infant life.

The extension of infant health clinics and the instruction given to mothers thereat, must be a great factor in this reduction.

The Table below illustrates the relationship of infant deaths to total births for several years:—

Year.	No. of Births Registered (exclusive of Still-births).	No. of Deaths from Enteritis under one year.	Per 1,000 Births
1923 ...	7,854	113	14·4
1924 ...	8,301	82	9·9
1925 ...	8,185	112	13·7
1926 ...	8,301	76	9·1
1927 ...	8,482	73	8·6
1928 ...	8,704	90	10·3
1929 ...	9,051	117	12·9
1930 ...	9,200	83	10·11
1931 ...	8,549	36	4·21
1932 ...	7,965	43	5·40

Scarlet Fever.

The fall in the incidence of this disease was continued in the two years under review, there having been only 203 cases notified in 1931 and 182 in 1932 as against 296 in 1930 and 418 in 1929. From past experience, however, it is reasonable to suppose that a wave of higher incidence is imminent.

Deaths attributed to scarlet fever were only 1 in 1931 and 2 in 1932. Fortunately the mortality from this disease is always low in Western Australia.

During both years the main incidence of the disease occurred in the metropolitan area.

Diphtheria.

This disease remains the bane of Health Departments in that it constitutes the greatest problem with which they have to contend, at least, in Australia. In 1930 a peak period was reached as regards incidence, when 1,045 cases, including carriers, were recorded. This was followed by 452 notifications in 1931 and 644 in 1932. In the latter year, however, the disease exhibited a lower virulence, the case mortality being only 3 per cent. as against 4.2 per cent. in 1931 and 4.1 per cent. in 1930.

So concerned have health authorities in Australia been regarding their comparative impotence in preventing this disease that the last meeting of the Federal Health Council in March, 1933, listed diphtheria as its main topic for discussion, and subsequently made the following pronouncements—

> *Resolution 1, Diphtheria:*
>
> (i) Great advance has been made in the knowledge of diphtheria, and antitoxin provides a reliable method of treatment of persons attacked by this disease, while the great improvements in general hygiene have undoubtedly improved the position in respect of diphtheria as well as other diseases. Notwithstanding this improvement, diphtheria as a community disease is still one of the principal public health problems, and attacks yearly in Australia a large number of children. It is increasingly clear that the co-operation of the whole community is essential to the control of this disease.
>
> (ii) Immunisation against diphtheria, when carried out under suitable conditions and with efficient prophylactics, effects a large reduction in the diphtheria mortality and morbidity rates among children thus treated. This is proved by studies carried out under strictly comparable conditions, such as those observed during the recent inquiries.
>
> (iii) Immunisation performed under proper conditions is safe as well as effective.

(iv) Diphtheria is specially a disease attacking children during the pre-school period and in the first years of school life. It is therefore recommended that immunisation against diphtheria should be carried out not later than during the pre-school period, after the end of the first year of life.

If the children have not been immunised during the pre-school period, they should be immunised, if possible, during the first year of school attendance.

(v) If every child of susceptible ages could be immunised as early as possible it may be assumed that diphtheria would cease to exist as a serious disease in the community.

Certain practical difficulties have, however, to be recognised as administrative factors so that it is improbable that immunisation will be adopted throughout the whole community for a long period.

Much can be done, however, in infected families, in schools, hospitals and other institutions; and this Council considers it very desirable that local health authorities should in their own districts institute and continue systematic immunisation of children now at susceptible ages and year by year of other children as they reach these ages.

The co-operation of the medical profession is desirable so that the practice of immunisation of private patients should be steadily encouraged.

In these ways the education of the public will progress until a near approach is made to a stage of sufficient immunisation in those districts or sections of the population where diphtheria is especially liable to occur.

(vi) The practice of mass-swabbing of schools is not now regarded as having the value which was once associated with it. The swabbing of contacts or under special circumstances of school classes is a valuable measure. The private medical practitioner should under all ordinary circumstances be encouraged to carry out the swabbing of ''house contacts'' and the supervision of measures of isolation consequent upon the receipt of a ''positive'' result. The private practitioner would be well-advised to encourage the use of prophylactic doses of antitoxin.

It is clear from the above that it is the considered opinion of those best qualified to know, that preventive inoculation has a very definite value in the control of diphtheria, but that to give the best results it should be carried out either in the pre-school period or during the first year of school life.

As age advances susceptibility to this disease gradually diminishes, so that during the later years of school life a large percentage of school children are not likely to contract the disease.

The principle generally followed, therefore, where preventive inoculation is carried out, is to regard all children under seven years of age as susceptible and to inoculate them without a previous Schick test for susceptibility, and in the case of older children to give preventive inoculation only to those who are susceptible, as demonstrated by the Schick Test. Unfortunately the carrying out of the necessary procedures is somewhat complicated by the necessity of more than one inoculation to produce complete immunity and by the necessity for a primary test upon the child for undue susceptibility to the material used to produce immunity. Experience is also necessary in reading the reactions produced, so that instruction of those carrying out the work is essential.

Although the preparation now used for inoculation is regarded as perfectly safe, some disturbance may occur in a very small percentage of susceptible individuals, so that in order to avoid any effects which may prejudice the success of a comprehensive scheme of immunisation, this sensitivity test, as it is called, should always be carried out. The details of this test should, therefore, be thoroughly understood by Medical Officers before undertaking the work.

The table below indicates prevalence during the past five years, and mortality from the disease—

——	1928.	1929.	1930.	1931.	1932.
Cases notified ...	639	539	1,045	452	664
Deaths	13	33	43	19	20
Case mortality per cent.	0·2	6·0	4·1	4·2	3·0
Per cent. of total deaths	0·56	0·84	1·14	0·52	0·54

The districts most affected were the following:—

	1931.	1932.
Metropolitan Area ...	343	569
Kalgoorlie	10	6
Wagin	13	4
Woodanilling	15	4
Northam	6	...
Albany	1	7
Busselton	...	9
Collie	20	21
Lake Grace	4	7

Measles.

Measles is not notifiable in the State, so that deaths from this cause form the only available index of incidence. There were no deaths attributable to this disease during the two years being reviewed, and only one in 1930. In 1929 there were 18 deaths recorded.

——	1928.	1929.	1930.	1931.	1932.
Deaths	3	18	1	...	...
Percentage of total Deaths	0·08	0·46	0·03	...	...

Whooping Cough.

As in the case of measles the number of deaths attributed to whooping cough is the only index of actual incidence. These deaths usually result from complicatory broncho-pneumonia. In 1931 ten deaths occurred, as against 11 in 1930 and 18 in 1929.

During 1932, however, there occurred a very severe and widespread epidemic of the disease, which resulted in 38 deaths. So severe was the epidemic that a special clinic was opened at the Children's Hospital where vaccine treatment of the disease was made available at considerable expense to the authorities concerned.

——	1928.	1929.	1930.	1931.	1932.
Deaths	7	18	11	10	38
Percentage of total Deaths	0·2	0·46	0·29	0·27	1·02

Infantile Paralysis (Acute Anterior Poliomyelitis).

This disease, though of serious concern in some other States of Australia and in other countries, shows no tendency to occur here to any extent beyond an occasional sporadic case. Only one case was notified in 1931, and two in 1932, as against four in 1930.

For some time attention has been directed to the use of the blood serum of recovered cases in the treatment of the disease during the early stages, with varying reports as to its value. This has been of recent years the generally accepted line of treatment.

It is therefore disturbing to read that an International Committee for the study of the disease has recently made the pronouncement that so far as statistical studies are concerned there is no evidence that the treatment of the disease by immune serum is of value.

Influenza, Bronchitis and Pneumonia.

Under this heading are grouped acute conditions of the lungs which every year claim a number of victims, especially amongst the aged.

In the case of influenza, death usually results from a complicating pneumonia.

The two years being reviewed show a distinct increase of deaths from these causes over the year 1930, though, except in the case of deaths attributable to influenza, less than in 1929.

——	1928.	1929.	1930.	1931.	1932.
Deaths from—					
Influenza	40	37	20	80	48
Broncho-pneumonia	117	113	63	86	80
Pneumonia ...	152	180	135	153	167
Bronchitis	48	55	33	48	41

Tuberculosis.

The figures for pulmonary tuberculosis remain fairly constant, though owing to a number of cases having been brought to light during examinations amongst miners in 1930, there is by comparison an apparent reduction in incidence during the two years under review

During 1931, 372 cases were notified and during 1932, 339, as against 569 in 1930. The deaths from this disease were respectively 223 and 203 as against 218 in 1930.

The deaths per 1000 of population in 1932, namely, .48, is probably the lowest recorded.

As regards forms of tuberculosis other than of the lungs, the death rate is again lower than previously, as is also the death rate from all forms combined.

The table below shows the figures under various headings for the past ten years:—

Year.	Cases notified.	Deaths.	Deaths per 1,000 of Population.	Percentage of total Deaths.
TUBERCULOSIS OF LUNGS.				
1923 ...	361	216	0·62	7·3
1924 ...	381	228	0·63	7·0
1925 ...	403	259	0·70	7·8
1926 ...	415	252	0·67	7·5
1927 ...	409	231	0·60	6·8
1928 ...	395	282	0·71	7·8
1929 ...	400	245	0·60	6·2
1930 ...	569	218	0·52	5·8
1931 ...	372	223	0·53	6·1
1932 ...	339	203	0·48	5·5
OTHER FORMS OF TUBERCULOSIS.				
1923 ...	...	16	0·046	0·54
1924 ...	...	22	0·061	0·67
1925 ...	...	29	0·079	0·87
1926 ...	...	18	0·048	0·53
1927 ...	...	19	0·049	0·56
1928 ...	...	33	0·082	0·91
1929 ...	43	35	0·085	0·89
1930 ...	20	32	0·076	0·85
1931 ...	35	22	0·052	0·60
1932 ...	24	18	0·043	0·48
ALL FORMS OF TUBERCULOSIS.				
1923 ...	...	232	0·66	7·84
1924 ...	...	250	0·69	7·67
1925 ...	...	288	0·78	8·69
1926 ...	...	270	0·72	8·59
1927 ...	...	250	0·69	7·37
1928 ...	...	315	0·78	8·65
1929 ...	...	280	0·68	7·12
1930 ...	...	250	0·60	6·62
1931 ...	407	245	0·58	6·66
1932 ...	353	221	0·52	5·95

Malaria.

Only 12 cases of malaria were notified in 1931 and 14 in 1932. Most of these cases occurred in the Wyndham district, a few only being recurrences in persons previously affected with the disease and now living in non-malarial districts.

Leprosy.

Two cases of leprosy were brought to light in 1931 and 5 in 1932. One of these was a European discovered in Perth, the others being aboriginals from the Beagle Bay district, which of late has been the main focus for the disease.

Another complete survey of the natives of the North-West in this connection is long overdue.

Arrangements now exist for the transfer of these cases to Darwin, where they are cared for by the Commonwealth at State expense.

Endemic Typhus (Brill's Disease).

This disease which appeared to be introduced into West Australia from Adelaide some years ago continues to crop up from time to time in the metropolitan area and Geraldton.

During 1931, 52 cases were notified, of which 30 occurred in the metropolitan area, 4 in Albany, 11 in Geraldton, 4 at Northampton, 1 at Walkaway, and 2 at Greenough.

In 1932 there were 36 cases, distributed as follows: 32 in the metropolitan area, 2 in Albany, 1 at Coolgardie, and 1 at Meekatharra.

Little advance in knowledge as regards actual causation of the disease appears to have been made, but there seems to be little doubt that the disease is associated with rodents, the general belief being that the rat is a carrier whence the disease is conveyed to humans by lice or fleas.

Puerperal Fever.

Twenty-five cases of puerperal fever were notified in 1931 and 26 in 1932, as against 20 in 1929 and 21 in 1930 The death-rate was, however, probably the lowest recorded, there having been only four deaths from this cause in 1931 and five in 1932, the deaths per thousand births being respectively .5 and .6.

These figures show a fall of approximately 66 per cent. upon the average for the previous five years.

There is also a considerable reduction noticeable in deaths from all causes of the puerperal state.

The table below shows the deaths due to childbirth from all causes other than accidents of pregnancy, for the past ten years:—

Year.	No. of Births, including Still-births.	Deaths from all causes of Puerperal State, exclusive of accidents of Pregnancy.		Deaths from Puerperal Septicaemia.	
		No.	Rate per 1,000 Births.	No.	Rate per 1,000 Births.
1923	8,076	22	2·7	8	1·0
1924	8,752	27	3·1	8	0·9
1925	8,449	32	3·8	8	0·9
1926	8,529	40	4·7	14	1·6
1927	8,696	42	4·8	18	2·1
1928	8,981	50	5·6	20	2·3
1929	9,304	33	3·5	10	1·1
1930	9,455	32	3·4	12	1·3
1931	8,766	21	2·4	4	0·5
1932	8,157	23	2·8	5	0·6

TABLE 1.—NOTIFICATION OF EACH TYPE OF INFECTIOUS DISEASE RECEIVED BY THE DEPARTMENT OF PUBLIC HEALTH FOR EACH MONTH OF THE YEAR ENDED 31ST DECEMBER, 1932.

Month.	Diphtheria.	Typhoid Fever.	Pulmonary Tuberculosis.	Scarlet Fever.	Brill's Disease.	Dysentery.	Puerperal Fever.	Other Tuberculosis.	Malaria.	Cerebro-Spinal Meningitis.	Leprosy.	Infantile Paralysis.
January ...	58	7	29	10	2	2	1	1	...	...	...	...
February ...	46	2	26	9	3	...	...	3	...	...	...	...
March ...	52	9	38	11	3	...	3	2	...	...	...	...
April	46	4	28	23	7	...	2	1	...	1	...	...
May	75	4	21	14	6	1	2	2	1	2	...	...
June	98	4	45	16	6	7	5	3	1	...	1	...
July	82	2	16	13	5	1	...	5	5	1	4	...
August ...	63	1	30	17	1	...	1	1	3	...	...	...
September ...	45	...	33	14	1	2	4	...	4	...	...	...
October ...	36	3	18	21	2	...	4	3	...	...	...	1
November ...	27	4	29	19	...	1	...	2	...	...	...	...
December ...	36	1	26	15	...	...	4	1	...	1	...	1
Totals ...	664	41	339	182	36	14	26	24	14	5	5	2

TABLE 1—NOTIFICATION OF EACH TYPE OF INFECTIOUS DISEASE RECEIVED BY THE DEPARTMENT OF PUBLIC HEALTH FOR EACH MONTH OF THE YEAR ENDED 31ST DECEMBER, 1931.

Month.	Diphtheria.	Typhoid Fever.	Pulmonary Tuberculosis.	Scarlet Fever.	Brill's Disease.	Dysentery.	Puerperal Fever.	Malarial Fever.	Purulent Ophthalmia.	Leprosy.	Other Tuberculosis.	Cerebro-Spinal Meningitis.	Beri-beri.
January ...	38	7	44	9	3	...	4	...	1	...	2	...	...
February ...	55	11	46	10	8	1	1	...	1	1	...	...	...
March ...	37	4	50	17	5	3	1	1	...	...	...	...	...
April	37	8	37	23	5	...	2	...	...	...	1	...	...
May	53	6	31	21	9	1	...	3	...	...	1	...	...
June	31	8	43	20	7	...	2	...	...	...	1	...	...
July	32	5	23	20	7	2	4	1	...	...	8	...	...
August ...	21	2	16	18	1	2	2	...	...	...	5	...	...
September ...	20	3	22	12	4	1	4	...	...	...	4	...	...
October ...	42	2	19	14	1	...	3	...	...	...	5	...	...
November ...	31	6	9	22	2	2	...	...	...	...	5	...	...
December ...	55	8	32	17	...	1	2	7	...	1	3	1	1
Totals ...	452	70	372	203	52	13	25	12	2	2	35	1	1

VENEREAL DISEASE.

The total number of new cases of venereal disease notified to the Health Department was for 1931, 972, and for 1932, 872, as against 1,105 in 1919 and 1,179 in 1930.

The apparent reduction has taken place only in the case of gonorrhoea, however, as during both years under review there was a very marked increase in syphilis, and, analysing the figures still further, it is evident that the main reduction has occurred in gonorrhoea amongst males, whilst there has been a very definite increase in syphilis amongst them.

The table hereunder indicates for these two diseases the comparative figures during the last four years:—

—	1929.	1930.	1931.	1932.
GONORRHOEA.				
Males ...	880	896	639	548
Females ...	99	154	152	121
PRIMARY SYPHILIS.				
Males ...	34	17	45	70
Females ...	1	4	3	11
SECONDARY SYPHILIS.				
Males ...	9	9	12	22
Females ...	6	7	15	14
Total ...	15	16	27	36
TERTIARY SYPHILIS.				
Males ...	25	40	36	44
Females ...	10	15	29	13
Total ...	35	55	65	57

The tables below summarise the notifications received during the two years under review:—

TABLE 1.

VENEREAL DISEASE.

Summary of Notifications for twelve months ended 31st December, 1931.

Disease.	Males.	Females.	Total, New Cases. (both sexes).	Total, Notifications received.
Syphilis—Primary	45	3	48	60
Secondary	12	15	27	33
Tertiary	36	29	65	104
Congenital	2	2	4	5
Total	94	49	143	201
Gonorrhoea	639	152	791	1,040
Chancroid (soft chancre)	11	1	12	14
Granuloma	10	14	24	24
Gonorrhoeal ophthalmia	1	...	1	1
Grand Total	756	216	972	1,281

TABLE 2.

SUMMARY OF VENEREAL DISEASE NOTIFICATIONS RECEIVED FROM METROPOLITAN AND OTHER DISTRICTS FOR THE YEAR, 1931.

Month.	District.	Syphilis.				Gonorrhoea.	Chancroid.	Granuloma.	Gonorrhoea Ophthalmia.	Totals.		Total.
		Primary.	Secondary.	Tertiary.	Congenital.					Metropolitan.	Other.	
January ...	Metropolitan ...	...	2	4	...	66	...	...	...	72	...	...
	Other	1	...	...	1	15	...	...	...	...	17	89
February ...	Metropolitan ...	5	1	...	...	92	...	...	...	98	...	...
	Other	...	...	...	...	9	...	...	1	...	10	108
March	Metropolitan ...	3	...	2	...	53	1	...	...	59	...	...
	Other	1	...	2	1	9	1	...	...	...	14	73
April	Metropolitan ...	10	4	1	...	73	2	...	...	90	...	...
	Other	2	...	1	...	8	...	...	...	...	11	101
May	Metropolitan ...	3	...	...	...	55	1	...	...	59	...	...
	Other	...	2	1	1	10	1	...	...	...	15	74
June	Metropolitan ...	...	...	2	...	42	...	...	...	44	...	...
	Other	...	...	...	...	8	...	...	...	...	8	52
July	Metropolitan ...	1	...	4	...	58	1	...	...	64	...	...
	Other	...	1	...	...	7	...	1	...	...	9	73
August ...	Metropolitan ...	2	2	1	1	19	...	...	...	25	...	...
	Other	2	2	...	...	5	...	1	...	...	10	35
September ...	Metropolitan ...	2	...	11	...	59	1	...	...	73	...	...
	Other	1	...	5	...	5	1	3	...	...	15	88
October ...	Metropolitan ...	1	...	1	...	33	...	...	...	35	...	...
	Other	...	...	1	...	9	...	14	...	...	24	59
November ...	Metropolitan ...	5	10	25	...	97	...	...	...	137	...	...
	Other	3	1	...	...	15	1	4	...	...	24	161
December ...	Metropolitan ...	5	1	2	...	36	...	...	...	44	...	...
	Other	1	1	2	...	8	2	1	...	...	15	59
	Grand Total ...	48	27	65	4	791	12	24	1	799	171	972

TABLE 3.
VENEREAL DISEASE—1931.

Months.	Hospital Clinics.				Private Doctors.		Prisons and Asylums.	Total.
	Children's.	Perth.	Fremantle.	Kalgoorlie.	Metropolitan.	Other.		
January	...	16	...	1	53	16	2	88
February	1	34	...	...	61	10	...	106
March	2	4	...	...	52	14	1	73
April	...	45	...	...	41	11	3	100
May	...	10	...	...	47	14	...	71
June	...	...	...	...	40	8	4	52
July	...	20	...	...	42	9	2	73
August	...	...	...	...	20	10	4	34
September	...	30	...	...	40	13	3	86
October	...	9	...	...	26	24	...	59
November	...	87	5	...	44	22	...	158
December	...	...	1	...	42	12	...	55
Total	3	255	6	1	508	163	19	955

TABLE 1.
VENEREAL DISEASE.

Summary of Notifications for twelve months ended 31*st December,* 1932.

Disease.	Males.	Females.	Total new Cases (both Sexes).	Total Notifications received.
Syphilis—Primary	70	11	81	95
Secondary	22	14	36	47
Tertiary	44	13	57	94
Congenital	3	2	5	7
Total	139	40	179	243
Gonorrhoea	548	121	669	877
Chancroid (Soft Chancre)	12	2	14	18
Granuloma	5	5	10	10
Grand Total	704	168	872	1,148

TABLE 2.
SUMMARY OF VENEREAL DISEASE NOTIFICATIONS RECEIVED FROM METROPOLITAN AND OTHER DISTRICTS—1932.

Month.	District.	Syphilis.				Gonorrhoea.	Chancroid. (Soft Chancre).	Granuloma.	Totals.		Total.
		Primary	Secondary.	Tertiary.	Congenital.				Metropolitan.	Other.	
January ...	Metropolitan ...	1	1	...	...	51	1	...	54	...	...
	Other	4	...	1	2	11	...	...	...	18	72
February ...	Metropolitan ...	4	1	...	...	29	...	...	34	...	...
	Other	...	...	1	1	10	...	1	...	13	47
March	Metropolitan ...	16	4	18	...	119	...	...	157	...	...
	Other	...	...	1	...	16	2	...	...	19	176
April	Metropolitan ...	12	2	2	...	35	3	...	54	...	...
	Other	1	...	1	...	6	...	...	...	8	62
May	Metropolitan ...	11	8	14	1	58	...	...	92	...	...
	Other	1	...	...	...	13	1	...	...	15	107
June	Metropolitan ...	5	5	...	...	29	...	...	39	...	...
	Other	1	2	1	...	9	...	1	...	14	53
July	Metropolitan ...	2	1	3	...	33	1	...	40	...	...
	Other	1	...	...	...	10	1	...	...	12	52
August ...	Metropolitan ...	3	2	2	...	34	2	1	44	...	...
	Other	3	1	4	...	21	...	1	...	30	74
September ...	Metropolitan ...	3	2	...	...	38	...	1	44	...	...
	Other	1	...	1	...	13	...	1	...	16	60
October ...	Metropolitan ...	2	4	...	...	29	...	...	35	...	...
	Other	...	1	7	...	12	1	3	...	24	59
November ...	Metropolitan ...	2	1	...	...	34	2	...	39	...	...
	Other	1	...	1	...	7	...	...	...	9	48
December ...	Metropolitan ...	2	1	...	...	43	...	...	46	...	...
	Other	5	...	...	1	9	...	1	...	16	62
	Grand Total ...	81	36	57	5	669	14	10	678	194	872

TABLE 3

VENEREAL DISEASE, 1932.

Months.	Hospital Clinics.				Private Doctors.		Prisons and Asylums.	Total.
	Children's.	Perth.	Fremantle.	Kalgoorlie.	Metropolitan.	Other.		
January	...	...	...	...	49	18	4	71
February	...	...	...	...	32	13	2	47
March	...	92	7	...	56	19	...	174
April	...	...	...	...	50	8	2	60
May	...	38	...	...	53	15	1	107
June	...	...	1	...	37	14	1	53
July	...	...	...	...	38	11	2	51
August	...	...	...	...	42	30	1	73
September	...	1	...	...	43	16	...	60
October	...	...	...	...	34	21	...	55
November	...	...	...	...	35	9	3	47
December	...	...	...	...	46	16	...	62
Total	...	131	8	...	515	190	16	860

DEPARTMENTAL.

Visiting Sisters.

These officers carry out the combined duties of supervising practising midwives, inspecting maternity homes, and regularly visiting and advising persons suffering from pulmonary tuberculosis in their homes.

During 1931, 2,552 visits were paid to tuberculous patients, and 1,976 in 1932.

Inspections of maternity homes numbered 525 in 1931 and 483 in 1932, whilst 950 midwives were visited in 1931 and 846 in 1932.

Midwives' Registration Board.

This body controls the practice and registration of midwifery nurses within the State.

During 1931, 46 candidates presented themselves for examination, of which number 42 were granted State registration.

The figures for 1932 were 54 candidates, of which 50 gained registration.

Nurses' Registration Board.

This Board, which controls the training and registration of general nurses within the State, continued to function as heretofore.

The number of candidates presenting for examination was in 1931, 104, and in 1932, 111.

Registrations granted during these years were respectively 100 and 101.

School Medical Inspection.

The staff engaged in the medical and dental examination of school children was reduced in 1932 by one medical officer and one school nurse, and consists now of two full-time medical officers and two nurses and three full-time dentists. One medical and one dental officer spend most of their time in country districts.

Reports of the work of these officers for the two years under review are presented on pages 12, 13, 14 and 15.

Pathological Laboratory.

The report of the Government Bacteriologist and Pathologist, and details of the work carried out under his direction will be found on pages 16, 17 and 18.

Infant Health.

The report of the Departmental officer supervising Infant Health Centres appears on pages 14 and 15

ANALYSIS OF FOODS AND DRUGS.

During 1931, 142 samples of foods were submitted to the Government Analyst for examination as to compliance with the standards laid lown in the Food and Drhg Regulations, whilst during 1932, 235 were submitted. Forty samples failed to so comply in 1931 and 43 in 1932.

MEAT INSPECTION.

The table on pages 19, 20 and 21 detail the number of carcases of the various food animals examined by the Departmental Health Inspectors and the numbers of carcases, part carcases, and organs condemned. The figures show a definite increase in the number of animals slaughtered and requiring inspection.

Similar information regarding slaughtering and inspection carried out at private slaughterhouses by local authority inspectors is also shown.

INSPECTION OF FOOD STUFFS ARRIVING FROM OVERSEAS.

The services of a departmental officer were available during the period to inspect incoming foodstuffs, and the following table records the amount and nature of foods seized and destroyed as unfit for human consumption:—

	Food.	Quantity lbs.	
1931—	Bacon	3,361	
	Canned Herring	140	
	Fresh Fish	1,436	
	Macaroni...	220	
	Beef	181	
	Cod Fillet	4,998	
	Prunes	2,712	
	Dates	3,600	
	Currants	672	
	Chicory	140	
	Lard	1,400	
	Sugar	1,200	
	Hams	132	
	Lentils	896	
	Potatoes	140	
	Total lbs. ...	21,228	
		packets.	
	Jelly Crystals	288	2oz. packets.
	Curry Powder	384	
	Total packets ...	672	
		lbs.	
1932—	Brussels Sprouts	840	
	Parsley and Mint	84	
	Fillet of Cod	98	
	Total lbs. ...	1,022	

SEPTIC TANK INSTALLATIONS.

In accordance with regulations a considerable amount of work was done by departmental officers in examining and approving of plans of septic tank installations before the work of construction was commenced.

During 1931, 281 such were dealt with, and during 1932, 399. In this connection a great deal of useful information and advice is given to householders and contractors whereby considerable time, trouble, and expense are saved to them.

LEGAL PROCEEDINGS UNDER THE HEALTH ACT.

Prosecutions for offences under the Health Act, with results and fines inflicted, are shown on pages 19 and 20.

For the most part the cases are conducted by the Department's Inspectors.

In conclusion I have to record my sincere appreciation of the great assistance I have received from all members of the staff, without whose loyal and active co-operation the successful working of the Department could not have been achieved.

EVERITT ATKINSON, M.A., M.D., D.P.H.,
Commissoner of Public Health.

REPORT OF SCHOOL MEDICAL OFFICER.

The Commissioner of Public Health.

Sir,

I have the honour to submit the following report in connection with the medical examination of school children during the years 1931 and 1932:—

Unfortunately, owing to the financial depression, it was found necessary to retrench one of our school medical officers, who was employed full-time in the examination of country school children. Her place was then taken by a city officer, who reverted to her original position of full-time country school medical officer. Children in the metropolitan schools have been examined by myself.

Two school medical officers are not sufficient to carry out the work in its entirety.

In addition to the above retrenchment, we are also working with one nurse less than usual, as one of the nurses has been "loaned" to the Child Welfare Department.

For the year 1931 the total number of medical examinations for both metropolitan and country districts was 20,614. This number is the highest attained in any year since the school medical service has been in operation, and the explanation lies in the fact that it was during the year under consideration, that is, 1931, that we had three school medical officers working almost full-time. In 1932 the number had fallen to 16,384, and during this period there were only two officers carrying out the same work.

During the years under review there have only been two nurses working instead of three; therefore it follows that the visits paid by nurses have fallen off considerably, so that for the two years only about 200 odd visits were paid. It is very unfortunate that this section of the work, that is, the following up to their homes of children, has had to be so reduced, because there is no doubt of the value of this section of the work. However, it is impossible for it to be otherwise, because the nurses' services are required for maintaining the standard of cleanliness in the schools, etc.

In the last report it was stated that a home for mentally deficient boys had been established by the Roman Catholic Church, thus making two homes in the State for this type of boy, so it will be seen that in this respect we are well catered for, but up to the present there is still no home for mentally deficient girls, and one is very urgently needed.

It is gratifying to be able to report that for the second time in succession, that is, in 1931, one of the schools in this State again won the Stewart

Shield. This shield is awarded for the best method of physical development. It has only been given twice, and on both occasions one of our schools has won it, though it is competed for—and I understand that the competition is very keen—throughout the Commonwealth.

Although, up to the present it has not been found necessary to enforce the new clause in the Health Act empowering the Department to prosecute parents who are negligent of their children's health, at the same time it is satisfactory to know that we have this power should we ever require to use it. The fact that the Department has this power has a moral effect in persuading parents, who are inclined to be negligent, to secure the necessary treatment for their children.

There is one point I should like to draw attention to, and that is that there do not appear to be sufficient facilities for the treatment of indigent school children, especially in regard to surgical treatment for tonsils and adenoids. At one stage last year one of the public hospitals was so overloaded with requests for this treatment that they had a waiting list of over 400, and the other hospital in the State doing similar work had a waiting list of over 300. Obviously, under such conditions really satisfactory work cannot be done, particularly when it is realised that the number of children requiring attention does not end with the waiting list.

An entirely new venture, which was initiated in 1931, was the establishment of a Health Section at the Royal Show. This section was divided into three parts—dental, infant health, and general health. It was established for the purpose of giving advice to country people, and not necessarily for children of school age.

During the first year, as the success of this venture was entirely problematical, it was undertaken with the minimum of expense, and for this reason was established in marquees. But, as it abundantly justified itself, it was decided in the following year to have a more permanent building, the State Savings Bank building being obtained for the purpose. This building was internally remodelled to suit our needs. Once again this section proved to be extremely popular, so much so that it was estimated that over 7,000 people took advantage of the services available to them.

It seems fairly safe to prophesy that this venture has come to stay, as it would appear to fulfil a real need. Furthermore, it is an extremely valuable means of health propaganda work.

Although we are working so short-staffed in regard to school work, nevertheless the work that is being done is very satisfactory, and it is pleasing to be able to report that the standard of cleanliness in the schools has very considerably improved, as shown by the fact that the percentage for pediculosis was lower last year than ever before, being only a little over 5 per cent., compared with over 8 per cent. for 1929. This improvement represents a great deal of hard work on the part of the school nurses, together with the active interest and co-operation of teachers in charge of the respective schools. Improvement in cleanliness is of the utmost importance, because of the very far reaching effect it has on the general outlook and standard of health of the child.

E. M. STANG,
Medical Officer of Schools.

SCHOOL CHILDREN EXAMINED DURING 1931.

METROPOLITAN AREA.

Routines.														Recalls.	
Number Examined.		Number Notified.		Number referred for Medical Attention.		Number referred for Dental Attention.		Number referred for Home Attention.		Number referred for Pediculosis.		Specials.			
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
4,144	3,900	2,797	2,723	1,012	990	1,538	1,517	1,264	1,347	34	133	129	99	2,006	1,881

COUNTRY DISTRICTS.

Routines.														Recalls.	
Number Examined.		Number Notified.		Number referred for Medical Attention.		Number referred for Dental Attention.		Number referred for Home Attention.		Number referred for Pediculosis.		Specials.			
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
4,335	4,046	2,738	2,817	1,019	1,071	1,427	1,394	1,215	1,477	96	394	22	35	145	157

SCHOOL CHILDREN EXAMINED DURING 1932.

Metropolitan Area.

Routines.														Recalls.	
Number Examined.		Number Notified.		Number referred for Medical Attention.		Number referred for Dental Attention.		Number referred for Home Attention.		Number referred for Pediculosis.		Specials.			
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
3,254	2,926	2,471	2,218	939	901	1,486	1,302	1,195	1,055	4	32	766	599	1,538	1,390

Country Districts.

Routines.														Recalls.	
Number Examined.		Number Notified.		Number referred for Medical Attention.		Number referred for Dental Attention.		Number referred for Home Attention.		Number referred for Pediculosis.		Specials.			
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2,994	3,053	1,955	2,105	767	749	846	906	1,102	1,399	87	441	63	55	656	573

REPORT OF SUPERVISOR OF INFANT HEALTH CENTRES.

The Commissioner of Public Health.

Sir,—

INFANT HEALTH.

I beg to submit my report on the above work for the years 1931-1932:—

The number of centres and sub-centres now under the control of the Infant Health Association has increased since my last report. There are now in the metropolitan area 12 main centres and 10 sub-centres, whilst in the country there are eight centres and 12 sub-centres, making in all 20 centres and 22 sub-centres.

Owing to the financial depression it has been difficult to keep many of the centres going, because, only being subsidised by the Government, most of the money necessary has to be provided by local effort. Nevertheless, it is gratifying to be able to report that only one centre has had to be closed down, whereas two new centres and three sub-centres have been opened.

For the year 1931 it was estimated that 9.200 babies were born in the State, and during that period 7,677 new babies were either brought by their mothers to the centres or were visited in their own homes by the nurses. This indicates that 83 per cent. of the mothers with babies took advantage of the Infant Health Centres. These figures may not be quite accurate, as owing to country mothers visiting metropolitan centres, a certain amount of duplication of entries occurs which under existing conditions it is not possible to avoid. Nevertheless, there are indications that a very large percentage of mothers did take advantage of the centres, which is all the more interesting when it is realised that there are still many large centres of population in the State that are not served.

During the year under review the infant health nurses had 68,008 consultations with mothers, of which medical advice was recommended in respect of 240 mothers and 660 babies.

Unfortunately the percentage of naturally-fed babies decreased during 1931 from 89 per cent. to 71 per cent. This serious falling-off was viewed with concern, and thought to be due to the suffering in mind experienced by large numbers of mothers as the result of unemployment.

For the year ending 1931 the infant mortality rate was the lowest for any year in the history of Western Australia, namely, 41.53 per cent.

In 1932 even greater strides were made with infant health work. This year, for the first time, a Baby Week Appeal was held, the purpose of this appeal being threefold:—(1) For infant health propaganda; (2) to raise money to help keep the centres going, and (3) to enable us to compete for the Imperial

Baby Week Shield, which is offered for competition among the British Dominions for the most effective work carried out in connection with infant welfare during the preceding twelve months, and culminating in a Baby Week.

It is extremely gratifying to be able to record that Western Australia at its first entry won this shield, particularly so in view of the fact that it was the first time that it had ever come to the Commonwealth, though other Australian States had entered from time to time.

During 1932, 8,556 babies were born in the State, and again a very large percentage of the mothers took advantage of the infant health centres. During this year the total number of consultations increased to 75,737.

It is, however, unfortunate to find that the percentage of naturally-fed babies shows a further decline, owing again it is believed to the unemployment problem.

Apart from the winning of the Shield, two or three other items of interest have to be reported in connection with this branch of our work:—

In the first place we have established a fund for the building of a Model Infant Health Centre for the City of Perth. Plans are being prepared and it is estimated that the building will cost £2,000. When completed this Model Centre should be a credit to the Association and an inspiration to the movement in the State. The money in this fund is growing quite satisfactorily.

Another outstanding feature of our work has been the establishment of an Infant Health Correspondence Nurse scheme for mothers whose isolation in country districts prevents their attendance at infant health clinics. This scheme was prepared by the writer, and agreed to by the Association. It was considered that it would be, as it is proving to be, of incalculable benefit to the women of the outback. So much so is this the case, that the work has grown to an extent which has made it necessary to put on a clerical assistant to help the nurse. The money for the scheme during the first year was found by one of our local newspapers, assisted by Government subsidy, but it is anticipated that in future, country districts will themselves maintain this scheme through various country organisations. It can now be claimed, quite justifiably, that by means of this correspondence scheme all the mothers in the State are linked up so that it is possible, wherever they live or under whatever conditions they live, to obtain any advice required on mothercraft.

Furthermore, we are co-operating with the Aborigines Department and giving them any help or advice needed by the nursing mothers under their care.

It may truly be claimed, therefore, that all the mothers in the State are being catered for by the Infant Health Association.

Another feature of our work has been the establishment of quarterly evenings for our Infant Health nurses. At these evenings a medical specialist is invited to give an address on some subject of interest to nurses dealing with infant welfare work, and at the same time nurses are asked to send in any questions relative to their work which they wish to have answered. In this way it is hoped to keep the nurses conversant with all the latest ideas and so quite up to date in their work.

Lectures, questions, and answers, are afterwards typed and distributed to all centre nurses, so that, although these nurses in the country cannot hear these lectures, they indirectly benefit by them.

These evenings, quite apart from their educational value, are proving desirable on account of the fact that they are welding the nurses into a united whole, with a common object—the welfare of the mother and child.

During the past two years a great deal has also been done to educate the public, as well as to stimulate public interest in infant welfare work, by means of wireless talks, articles on infant health questions, and straight-out publicity concerning the doings of the Association.

In addition to the above, over fifty public lectures have been delivered on matters pertaining to infant welfare.

E. M. STANG,
Medical Supervisor.

REPORT OF SCHOOL DENTIST.

The Commissioner of Public Health.

I beg to submit report of the activities of the School Dental Officers for the two years ended December 31st, 1932.

During this period 51 metropolitan and suburban and 17 country schools were visited. The number of the latter is much less than that of the previous two years owing to financial stringency causing the abandonment of country work during the whole of 1931.

During 1932, however, country visiting was again carried on. I took the opportunity of trying out a new programme. The schools we usually visit were made the operating centres of the surrounding districts for a radius of about 20 miles. Through the medium of head teachers of all small schools situated in the particular areas, the parents of children of the ages with which we deal (6 and 7 years) were invited to bring or send these children into the operating centres for examination and treatment. This scheme thus covers schools which are too small to be visited individually and we have had a fair amount of success with it, particularly in group areas where the parents are taking full advantage of our offer.

We often have requests to treat children, anywhere between the ages of 8 and 14, but with our present staff it is impossible to do so, and until the staff is enlarged it is necessary to draw the line rigidly, otherwise we would become involved in a volume of work from which we could not extricate ourselves without causing more disappointment than is at present felt. In order that this statement should be understood, I shall elaborate it.

We have always dealt with children of the ages of 6 and 7, as we consider that period the most vital. Some of the most important of the permanent teeth have by then erupted and in many cases have commenced to decay. We concentrate on saving these teeth and then deal with the temporary teeth, filling those that can be put to a few more years of useful work and extracting those that endanger the health. The other permanent teeth then have a chance of coming through straight and undecayed. In trying to understand our methods it must be realised that some of the temporary teeth (canines) should remain in the mouth until the age of 13. The four front teeth in top and bottom jaws are generally replaced by the age of 8, but the others are not normally replaced by the permanents until the ages of 10, 11, 12, and 13, according to the type. The too early loss of a temporary tooth generally results in the closing of the space which should be filled later on by the corresponding permanent tooth.

Many people cannot understand this care of the temporary teeth, so I shall quote a result of lack of care. The temporary canine is often lost through decay at the age of 7. The permanent one is not due till five or six years later. A space is therefore left, which is gradually encroached upon by teeth on either side. When the permanent one is due to erupt it finds the proper place closed up and has to find another way out. It generally chooses the gum high up under the lip, and a "buck tooth" or "dog's tooth" is the result. Now, if the decayed temporary canine had been filled in time, it would have been usefully retained for several years and a "buck tooth" would not have appeared.

It will be seen, therefore, that conservative work as well as extractions is necessary among temporary teeth.

We are doing the best we can, but the above ideal (giving every child at the age of 6 and 7 the opportunity of treatment) is in itself slightly beyond our present staff, and until we can cover that ground adequately, it will be realised that it is not feasible to allow work for older children to creep in and render our programme haphazard.

During the time under review, 5,817 children were examined. Of this number 3,731, with the consent of their parents, were treated at the different schools, 729 needed no attention, 339 were to be done by private dentists, while the remainder were those whose parents did not reply to the notifications sent out. Of these latter, quite a number we hope, after being informed that the children needed dental attention, would have had the work done privately, but there is no record of that.

The school holidays were filled in by attendance at the following orphanages:—Fairbridge Farm School, Cottesloe Girls' Home, West Subiaco Boys' Home, Swan Boys', Clontarf and Seaforth.

In May, 1932, a visit was paid to the Moore River Native Settlement—112 patients were attended, involving the extraction of 259 teeth. It is intended to make this visit an annual affair. The class of patient seen was mostly half-caste, and their teeth did not seem to be in a very much better condition than those of the average white adult. We have not yet had an opportunity of examining a large number of full-blood aboriginals in order to see whether there is truth in the statement that native races have better teeth than civilised ones.

Saturday mornings have been spent at the Claremont Hospital for the Insane, with occasional visits to the Old Men's Home, Lemnos and Heathcote. The number of patients seen at these institutions during the two years was 576, and the following work was done for them:—Extractions, 485; Fillings, 4; New dentures, 43; Repairs to dentures, 131; Prophylaxis, 29.

Denture work was done in conjunction with the Dental Hospital.

The following work was done at schools and orphanages:—

Silver amalgam fillings	252
Copper amalgam fillings	8,443
Copper cement fillings	1,684
Porcelain fillings	10
Silver nitrate treatments	5,314
Other fillings or treatments	351
Extractions	9,831
Prophylaxis	1,120

In conclusion, some propaganda was embarked upon by means of talks to children and lantern lectures to parents in order to (1) impress them with the value of proper home feeding and attention as aids in the building of good teeth; (2) show the value of our work and that of other dentists generally on the teeth of younger children; (3) show the necessity of a healthy mouth as an aid to a healthy body.

A. G. McKENNA,
Senior Dental Officer of Schools.

23rd May, 1933.

REPORT OF BACTERIOLOGIST AND PATHOLOGIST.

To the Commissioner of Public Health, Perth.

Sir,

I submit herewith a record of the work done in the Public Health Laboratory for the years 1931 and 1932.

As regards diphtheria, the number of swabs examined for this disease is large, particularly in 1932, when the number 7,608 was reached. This was due to the disease persisting throughout the year, not in epidemic form but with a fairly high incidence over most of the State. A fairly large part of the seven thousand is due to the swabbing of scholars to detect carriers of the disease.

Examinations for tubercle is much as in former years, 700 to 800, the number of guinea pig tests being just over 30.

Examinations of blood for typhoid and allied diseases keep well up, but nowadays the amount of typhoid fever in the State is small. The number of tests done was from 100 to 150 yearly. Of these only 19 were positive for typhoid, but up to 31 were positive in one year for Brill's disease. This disease is well established in the State. Fortunately it is not a dangerous disease although the sufferers may become very ill for a time.

The number of smear examinations for venereal disease is stll increasing. The number reached 2,689 during 1932, being about a thousand more than in 1930. This increase also applies to blood tests (Wassermann reaction and Complement Fixation reactions for gonorrhoea), the former reaching 3,600 and the latter 356. This part of Laboratory work has shown a steady increase yearly and will probably go on, the reason being twofold, one because the Wassermann test is the best guide as to whether a case is cured and the other because it is being used more and more as a routine test in some institutions.

The water supply of Perth as regards its purity is very carefully watched, and all sources of supply are examined in the Laboratory either weekly or bi-weekly, the number of examinations done being roughly 450 for the year.

The amount of bio-chemical work is steadily increasing, the estimation of urea in blood and urine respectively being 90 and 34 for 1932. It is very difficult for a Laboratory worker to assess the value of the former test, especially in children.

W. S. McGILLIVRAY,
Bacteriologist and Pathologist.

21st July, 1933.

1931.

——	Positive.	Negative.	Incomplete.	Total.
Diphtheria—				
Swabs (throat and nasal) ...	425	5,122	...	5,547
Swabs (virulence for K.L.B.)	3	...	...	3
Tuberculosis—				
Sputa	112	674	...	786
Pus	...	4	...	4
Urines	...	5	...	5
Guinea-pig inoculations (T.B.)	1	33	...	34
Cerebro-spinal fluids for T.B.	...	4	...	4
Typhoid Fever, including Paratyphoids—				
Blood agglutinations ...	19	82	...	101
Fæces	...	28	...	28
Urines	1	14	...	15
Blood cultures	...	2	...	2
Brill's Disease—				
Bloods for agglutination (Weil Felix reaction)	31	58	...	89
Syphilis and Gonorrhoea—				
Smears for gonococci ...	298	1,594	...	1,892
Smears for spirochæta pallida	1	6	...	7
Urines for gonococci ...	...	12	...	12
Wassermann Reactions ...	553	2,825	68	3,446
Complement Fixation (gonorrhoea)	97	245	5	356
Complement Fixation (hydatid)	1	12	1	14
Leprosy Smears	5	2	...	7

General Bacteriology.

Urines for organisms	323
Pus for organisms	39
Pleural fluids for organisms	10
Sputa for organisms	8
Fæces for organisms	10
Bloods for organisms	8
Slough for gas gangrene	1
Catgut for sterility	1
Skin scraping	1

General Bacteriology—continued.

Gall bladder	1
Cervical swabs	4
Nasal swabs	2
Ascitic fluid	1
Cultures for gonococci	6
Cultures for B. Mallei	1
Fluid (knee)	1
Wheat sack	1
Kangaroo tendon	1
Beer	1
Pyorrhœa	1
Vincent's Angina (swabs)	10
Cerebro-spinal fluids	18

Chemical and General.

Urines	354
Blood for urea	64
Blood for sugar	20
Urines for urea concentration	22
Sugar—tolerance tests	2
Stomach—contents	1
Potted crayfish	4
Meat paste	6
Occult blood (fæces)	5
Blood—coagulation rate	3
Material passed P.R.	3
Skull	1
Raisins	1
Fish	1
Tomato sauce	1
Blood—Van den Berglis test	6
Disinfectants for co-efficiency	10
Medico-legal exhibits	22
Worm for identification	1
Axe and wood chips for blood	
Vomit for blood	1
Rat for plague	1
Hairs for ringworm	1
Liver fluid for hooklets	1
Vaginal swabs for spermatozoa	4
Cerebro-spinal fluids for chemical and cells	37
Vaccines—	
Pyogenic infections	44
Respiratory tract	24
Urines	9
Fæces	6
Pyorrhœa	4
Gall bladder	1
Cervix discharge	1
	89
Blood counts (total)	51
Blood films for leukæmia	20
Blood films for malaria	4

(all negative.)

Waters.	Milks.
451	18

Pathological, Malignant.

Squamous carcinoma	11
Adeno carcinoma	10
Scirrhus carcinoma	5
Rodent ulcer	3
Sarcoma—spindle celled	3
Sarcoma—round celled	5
Sarcoma—mixed celled	2
Sarcoma—alveolar	2
Endothelioma	2
Glioma	1

Pathological, Non-Malignant.

Simple inflammatory	18
Fibroma	3
Fibro-adenoma	20
Cyst	1
Adenoma	4
Fibrosis	12
Normal tissue	10
Polypus	3
Cystic	10
Wart	1
Granulation tissue	5
Leprosy	1
Fibro-cystic	3

Pathological, Non-Malignant—continued.

Myoma	1
Degeneration tissue	4
Hæmatoma	3
Thrombosis	1
Products of conception	2
Exostosis	1
Lymphangioma	1
Broncho-pneumonia	1
Myxoma	1
Goitre	1
Tuberculosis	10
Grand Total	14,167

1932.

—	Positive.	Negative.	Incomplete Positive.	Total.
Diphtheria—				
Swabs (throat and nasal) ...	486	7,122	...	7,608
Swabs (virulence for K.L.B.)	1	3	...	4
Tuberculosis—				
Sputa for T.B.	100	600	...	700
Urines, guinea-pig inoculation, T.B.	3	29	...	32
Cerebro-spinal fluids ...	...	2	...	2
Pus	...	3	...	3
Pleural fluids	...	1	...	1
Urines for T.B.	...	16	...	16
Cerebro-spinal fluids ...	...	3	...	3
Pus	1	7	...	8
Gastric fluid	...	1	...	1
Typhoid Fever, including Paratyphoids—				
Bloods for agglutination ...	19	129	...	148
Fæces	2	24	...	26
Urines	1	27	...	28
Brill's Disease—				
Bloods for agglutination (Weil Felix reaction)	22	124	...	146
Syphilis and Gonorrhœa—				
Smears for gonococci ...	558	2,131	...	2,689
Spirochæta pallida	1	9	...	10
Wassermann reactions ...	524	3,046	123	3,693
Complement Fixation for gonorrhoea	152	292	4	448
Complement Fixation for hydatid	2	10	...	12
Leprosy Smears	5	7	...	12

General Bacteriology.

Urines for organisms	490
Fæces for organisms	24
Cerebro-spinal fluids	27
Blood cultures	6
Bowel mucus	6
Pleural fluids	2
Pus	14
Swabs—Vincent's Angina	6
Pus—pyorrhœa	3
Skin smears	2
Discharge from nipple	1
Swab, rectal wall	1
Bowel ejecta	2
Mouth smear	1
Crayfish	9
Rabbits	1
Sputa	12
Scalp scales and hairs or ringworm	3
Stomach	1
Meat	1
Swab—Gas bacilli	1
Cod-liver oil emulsion	2

Vaccines—1932.

Respiratory tract	22
Pus—pyorrhœa	2
Tonsils	10
Pyogenic infections	41
Urethritis	1
Urines	6
Fæces	1
	83

Chemical and General—1932.

Bloods for urea	90
Urines for urea	34
Bloods for glucose	13
Urines for microscopic	490
Urines for microscopic and chemical	57
Cerebro-sp. fluids, microscopic and chemical	59
Fæces for occult blood	6
Fæces for parasites	12
Medico-legal exhibits	11
Sausage	1
Blood for coagulation rate	2
Sheep dip mixture	1
Ascitic fluid	1
Sodium fluoride	1
Bread and flour	1
Skin scraping	2
Tomato purée	4
Essential oils for carbolic acid co-efficiency	5
Disinfectants for carbolic acid co-efficiency	5
Blood for quarter-ill organisms	1
Smear for Ducrey's bacillus	1
Bloods for leukæmia	21
Bloods for total count	20
Bloods for malaria	3 (all negative.)

Waters.	Milks.
457	19

Tumours and Tissues—1932.

Human.

Malignant—	
Squamous carcinoma	7
Adeno-carcinoma	9
Scirrhus carcinoma	2
Carcinoma simplex	6
Rodent ulcer	4
Sarcoma—round-celled	2
Sarcoma—mixed-celled	3
Endothelioma	2
Melanotic sarcoma	3
Glioma	1
Non-Malignant—	
Simple inflammatory	15
Fibroma	3
Fibro-adenoma	16
Cyst-adenoma	3
Adenoma	2
Fibrosis	10
Normal tissues	13
Polypus	6
Lipoma	3
Cysts	4
Warts	1
Papilloma	1
Angioma	3
Granulation tissue	1
Myxoma	1
Leprosy	1
Mole	
Lymphoid tissue	4
Products of conception	4
Goitre	2
Necrosis	
Broncho-pneumonia	
Hyperkeratosis	
Tuberculosis	7
Chondroma	2
Myoma	4
Osteoma	1
Degenerations	2
Grand Total	17,673

MEAT INSPECTION.

Return of Animals Slaughtered and Condemnations for the year ended the 31st December, 1931.

ANIMALS SLAUGHTERED.

Cattle	29,199
Calves	604
Sheep	549,618
Pigs	68,471
Total	647,892

CONDEMNATIONS.

Pathological Condition.	Carcases Condemned.	Part Carcases Condemned.	Organs Condemned.
Actinomycosis	1	90	95
Abscess	...	30	232
Actino-bacillosis	...	16	23
Angioma	...	...	1
Carcinoma	1	...	2
Cirrhosis	...	...	30
Cystic	...	...	2,869
Congestion	...	...	15
Emaciation	180	...	...
Fatty infiltration	...	...	727
Gangrene	26	15	12
Hydatids	...	...	12,768
Hydræmia	...	...	...
Inflammation	44	...	32
Immaturity	1	...	...
Icterus	24	...	...
Lymphadenitis	6	14	16,804 (glands)
Moribund	41	...	...
Melanosis	...	...	1,354
Necrosis	...	...	10,215
Œdema	4	...	...
Pleuro-pneumonia	...	...	52
Pyemia	8	...	...
Pneumonia	2	...	65
Pyrexa	18	...	...
Putrefaction	9	1	...
Piro-plasmosis	20	...	...
Sepsis	4	...	...
Traumatism	14	128	...
Tuberculosis	232	896	396
Uræmia	3	...	...
Miscellaneous	18	11	331
Totals	656	1,201	46,023

Animals Slaughtered at Private Slaughteryards, where Meat Inspection and Branding Regulations are in Operation, for Year ended 31st December, 1931.

——	Cattle.	Calves.	Sheep.	Pigs.
Albany	424	43	7,961	666
Bunbury	913	232	10,030	1,916
Katanning	278	57	5,071	257
Northam	355	62	9,188	1,695
Collie	702	703	9,788	1,188
Narrogin	320	37	8,807	363
Geraldton	831	18	11,690	968
Total	3,823	1,152	62,535	7,053

LEGAL PROCEEDINGS TAKEN UNDER THE HEALTH ACT FOR YEAR ENDED 31st DECEMBER, 1931.

Offence.	No. of Cases.	Convictions.	Withdrawn.	Dismissed.	Fines and Costs.
					£ s. d.
Health Act	35	27	7	1	102 7 7
Meat Branding Regulations	3	3	...	...	6 15 6
Food and Drug Regulations	21	18	6	...	88 10 3
Dairy By-laws	1	1	...	...	2 5 0
Hospital Fund Act	69	50	19	...	89 11 11
Totals	132	99	32	1	£289 10 3

MEAT INSPECTION.

Return of Animals Slaughtered and Condemnations for year ending 31*st December*, 1932.

ANIMALS SLAUGHTERED.

Cattle	28,638
Calves	544
Sheep	516,200
Pigs	85,841
Total	631,223

CONDEMNATIONS.

Pathological Condition.	Carcases Condemned.	Part Carcases Condemned.	Organs Condemned.
Actinomycosis	...	106	110
Abscess	...	38	229
Actino-bacillosis	...	11	27
Angioma	...	...	9
Cirrhosis	...	...	68
Cystic	...	...	4,244
Congestion	...	...	63
Emaciation	68	...	...
Fatty infiltration	...	...	1,568
Gangrene	16	22	...
Hydatids	...	...	15,779
Icterus	6	...	...
Lymphadenitis	4	5	16,822 (glands)
Moribund	31	...	...
Melanosis	...	...	1,382
Necrosis	...	...	10,467
Œdema	1	...	...
Pleuro-pneumonia	...	...	30
Pyemia	4	...	...
Pneumonia	5	...	2
Putrefaction	1	...	...
Piro-plasmosis	18	...	...
Sepsis	32	...	...
Swine plague	3	...	...
Traumatism	23	71	...
Tuberculosis	346	1,021	406
Uræmia	2	...	...
Miscellaneous	21	...	...
Totals	581	1,274	51,206

Return of Animals Inspected and Branded at Private Slaughterhouses where Meat Inspection and Branding Regulations are in Operation for Year ending 31*st December*, 1932.

———	Cattle.	Calves.	Sheep.	Pigs.
Northam	474	85	12,465	4,411
Albany	551	39	10,040	790
Collie	924	...	11,559	963
Metropolitan Markets (West Perth)	195	7,537	4,897	3,232
Katanning	377	79	5,256	331
Geraldton	970	41	12,712	1,218
Narrogin	354	48	7,025	536
Bunbury	1,203	299	10,970	2,228
	5,008	8,128	74,924	13,709
Fremantle	41	1,120	114	1,749
Grand Totals	5,049	9,248	75,038	15,458

LEGAL PROCEEDINGS TAKEN BY THE INSPECTION BRANCH FOR YEAR ENDED 31ST DECEMBER , 1932

Offence.	Complaints.	Convictions.	Withdrawn.	Dismissed.	Fines and Costs.		
					£	s.	d.
Health Act	28	26	2	...	125	0	10
Food and Drug Regulations	14	13	...	1	70	17	0
Police Act (using obscene language to an Inspector)	1	1	...	...	2	5	0
Bread Act	1	1	...	...	3	3	0
Hospital Fund Act	39	35	2	2	57	7	0
Totals	83	76	4	3	£258	10	10

REPORT OF CHIEF RESIDENT MEDICAL OFFICER OF THE WOOROLOO SANATORIUM.

Wooroloo Sanatorium,
25th July, 1933.

The Principal Medical Officer,
Perth.

I have the honour to submit the following report for the years 1931 and 1932:—

If the figures in the appended tables be considered, it will be seen that Wooroloo Sanatorium still continues to receive an undue proportion of advanced cases. It, however, is not singular in this respect, judging by reports and observations in other parts of the world.

In the last 20 years, we have had three outstanding factors which it would be natural to expect would influence the incidence of tuberculosis unfavourably; these factors, are the Great War, the Spanish influenza epidemic and the general wide world economic depression.

Examining the three factors dispassionately, I would be disposed to think that the most unfavourable factor has been the Spanish influenza epidemic.

The influence of the Great War for the civil population in this country should be favourable rather than the reverse, for prosperity rather than hardship represented the position.

Even to-day, I think I see the influence of Spanish influenza on respiratory disability.

Strangely enough, the existing economic depression does not seem to have had an unfavourable influence on the incidence of tuberculosis.

This, I attribute, to a compulsory return to more normal conditions of living.

It is difficult to determine how far mining in the male population, has been responsible for the incidence of tuberculosis, as a strict examination of the working history of male sufferers frequently reveals that at some time or other in their lives they have been engaged in or about the mining industry.

There can be no question of the beneficence of the Miners' Phthisis Act in combating the question. This Act is undoubtedly the legislative parent of what should prove a productive family in mining and other industries.

This leads one to the consideration of the question of pensions and compensation. One of the greatest weaknesses in administration of the tuberculosis problem one has to contend with is the tendency to regard the condition of one diagnosed as "tuberculosis" to be synonymous with total incapacity, resulting in murder from over treatment, and suicide from ineptitude and dry rot. I feel strongly and speak strongly.

Any pension or compensation which precludes continuance of remunerative employment is defeating the purpose for which it was introduced, and I think in this respect the invalidity pension is worthy of review, particularly as regards tuberculosis.

From an economic standpoint, there is room for much advance in dealing with the position.

It largely exists due to phthisophobia and refusal of the public to realise that association with an educated and careful tuberculosis individual does not necessarily mean infection to others.

In this respect I would again refer to community tuberculosis settlements as illustrated by the Papworth Settlement Scheme, Cambridgeshire, England, evolved and directed by Dr. Sir P. Varrier-Jones.

Their T.B. incidence as exemplified by the figures regarding the progeny of the settlement is a lesson to be emulated by all public health bodies. The settlement itself is self-supporting, and represents a sound economic public health proposition.

The social factors of housing, nutrition and education are all embodied in this scheme, which appears to me as ideal.

It perhaps would be well to mention some factors which are from time to time discussed, as having an influence on the control and well-being of a consumptive. One which constantly crops up is that of climate, and I always take thhe opportunity of emphasising to patients an axiom, viz:—"It does not matter so much where you live as how you live." This, of course, has to be qualified as having limits, particularly with regard to a damp clay subsoil and prevailing winds.

Moisture is not to be regarded as of any great consequence, and as regards dryness, it does not appeal as an advantage, particularly with winds accompanied by siliceous dusts.

I have seen cases which could be regarded as primarily silicotic in individuals who had never been down a mine.

Further, with regard to climate, it is desirable to refer to the pernicious practice of medical men in Europe recommending people with chest conditions to emigrate to Australia.

For people of independent means, who can direct their mode of life without considering a means of livelihood, and who can move from place to place as caprice dictates, this does not matter, but for those with a tuberculous lung lesion who have to earn their livelihood, it spells disaster.

One frequently comes across such cases, they do well in winter, but when exposed to the hot broiling sun under hard working conditions, the disease becomes activated, and each summer sees them slip gradually to chronicity and total incapacity.

Such cases I always advise to seek their native clime and conditions; and subsequent history, in many instances, justifies the advice.

Incidentally, sun exposure is frequently stressed in the press at present as being a dangerous factor in causation of cancer, and I think it could be equally stressed as a factor in activating latent tuberculous lung lesions. Excessive sun in play, for example, sun-bathing as well as in work, can spell disaster.

A reference to food and work is not amiss. There is too much fashion in medicine, and one has in his career seen many phases of this.

It is pitiable to take up the daily Press and find some old fashion revived and lauded to the skies.

In the days of one's youth, the starvation cure gained much kudos, and it has been resuscitated and acclaimed as something new.

With tuberculosis we arrived at the intensive stuffing stage, which should be a thing of the past, but is an idea which dies very hard.

It is expensive to health and pocket.

What value is there in having an individual put on stones over his average weight, when he is unable to walk more than a yard or two without being breathless?

In discussing this question of weight with patients, I always try to inculcate the principle that a pound in weight or an inch in measurement above the belt is worth six inches below.

It is pitiable to see efforts to stuff the body with all sorts of pabula, when nature and particularly digestion, is shrieking out against it.

In most cases, when patients complain they cannot eat, I insist on their giving their digestions a rest for forty-eight hours, the eagerness for food then being remarkable.

Relations and friends, really unable to afford it, continue to send unsuitable delicacies to the detriment of the patient.

Whilst each case is a law unto itself, I have observed instances of cases to all appearances similar, where the one case without friend and delicacies, does well; the other, pampered in every particular, retrogresses in health, becomes peevish and is no good to himself or anyone else.

Let us, then, drop weight as a fetish, and use our common sense to assess what is a legitimate normal in each case.

The therapeutic value of suitable work cannot be stressed too strongly.

There is no disease in which the psychic element looms more strongly, and one of the greatest factors assisting arrival at the stage of "mens sana in corpore sano," is work of a suitable nature.

In Australia, in dealing with the mining pulmonary disease problem, failure undoubtedly results from not providing work of a suitable nature. The average miner is not particularly interested in work of an agricultural nature, which has been made the main egress from the industry, vide—the Broken Hill Settlement Scheme, and Miners' Farm Settlement in this State.

The miner who has spent his life underground does not take kindly to the rigours of outdoor life which attend farming, orcharding and horticulture.

Hark back to Papworth and see what is provided there. Vocational training is given in bag making and leather work, carpentering, printing, etc. Commercial travellers are employed to dispose of the articles produced which have a ready market, the result being an income commensurate with the growth of the place. Starting from scratch, they now dispose of some £70,000 worth of manufactured goods.

As to treatment, time remains the essence of the contract. How absurd it is to promise cure of a condition which has been striking for years.

> "Whilst meagre phthisis gives a silent blow:
> Her strokes are sure, but her advances slow.
> No loud alarms nor fierce assaults are shown,
> She starves the fortress first, then takes
> the town."

It is disconcerting, not to say heartbreaking, when one comes across the patient who has been promised a cure in a specified time. I always try and impress the importance of time by the visible illustration of a child suffering from hip-joint disease, tuberculosis of hip-joint. I draw the attention of the patient and his friends to the continued immobilisation of the joint over a period of years which is necessary and then draw the analogy of the like need for continuance of treatment over a period of years for T.B. lungs. In spite of that, one comes across super-optimists who gaily and cheerily promise cure of T.B. spine within months, or a year, never stressing the necessity for continued care.

There are few cases of tuberculosis which are absolutely hopeless, and from the first stage to the third chronic state, we should remember that every case is a law to itself.

As I have said before, diagnosis of tuberculosis should not be synonymous with condemnation to a life of inactivity and uselessness.

Each and every one should be encouraged to fill a useful niche of some sort in the world's life and progress.

In this connection, I always refer to the life of that great man, Cecil Rhodes, who went to South Africa with no lungs left, to die, but lived to found an Empire.

Let me commend to everyone's notice the description of "The Sick Boy" in Lord Hamilton's book, "Here, There and Everywhere." It is the finest sermon any sufferer from tuberculosis could have.

To review the position as regards tuberculosis, there have been no outstanding or recent advances in treatment. Operative treatment has its advocates and no doubt in suitable cases, it is of value. Unfortunately, we do not see many such suitable cases at Wooroloo. Of course, every individual suffering from tuberculosis naturally thinks he or she is the suitable case.

Regarding the operative procedure of pneumothorax, it is interesting to observe that it was first advocated by Carson in 1821, more than a century ago. It does not even to-day receive universal approbation.

At present we have advocates of all sorts of surgical procedures, but I read recently a review which gave the value of reading the literature on the subject as being that of apprising one what should not be done.

There are still many advocates of various tuberculins, and here we find tuberculin of value in a small percentage of carefully selected cases.

As for drugs, as usual many have appeared on the market, have been vaunted, and have disappeared. From a psychic point of view some may have an effect, gold particularly, especially as the price has gone up, but outside of some patented preparations of gold which naturally claim virtues, there are not many who seriously claim any specific action or virtue.

A matter of some concern for which it is difficult to assign reason is the apparent increase in the incidence of laryngeal tuberculosis.

Of recent years it appears to me that there has been an increase in the incidence of upper respiratory infections generally. Should this be a fact, then an increased incidence of laryngeal tuberculosis is a natural corollary.

Those who have been able to carry out a system of graduated work have benefited materially thereby. The numbers we are able to so employ are not so numerous as we should like but the results are heartening, and raise hopes that when resources are more elastic we may be able to adopt some definite form of vocational training.

Due economy has been observed in the administration of the institution, but with no curtailment of efficiency in essentials. The relations between patients and staff have been excellent, and largely through the support of the staff, the Progress and Pastimes Club have been able to purchase on time payment "a talkie machine," superseding the old silent pictures. Entertainments by the outside public have naturally not been so frequent as in former years.

The usual tournaments and games are carried on by the Progress and Pastimes Club, which is a body run and managed by the patients themselves.

The institution is indebted to the Comforts Fund Committees, who particularly interest themselves in providing suitable Christmas gifts and cheer. It would be invidious to particularise the many individuals and firms who consistently show their interest in the welfare of the patients by donations and gifts.

Donations of books, magazines and gramophone records are much appreciated.

The spiritual needs of the patients are well served by the various denominations, and on behalf of the patients I thank those who minister in this direction.

I desire to acknowledge the work carried out by the departmental visiting nurses, who are assiduous in supervising the patients after they return home.

I personally have to thank them for carrying out various requests made by me for reports of conditions of patients and family. Their efforts are of material benefit in sending along contacts and suspicious cases for investigation.

The farm manager is to be congratulated on the success attending his efforts at the institution farm.

The stock (cattle and pigs) is the admiration of all.

The poultry yard is still being carried on successfully, the egg production being sufficient to extend supplies to various other Government institutions.

Finally, I desire to thank the matron, secretary and staff generally for the interest maintained in the patients and the work of the institution.

I have the honor to be, Sir,

Your obedient servant,

ROBERT M. MITCHELL,
Chief Resident Medical Officer.

DEATHS—1932.

Occupation.	Age.	Native of :	Cause of Death.	No. Days in Hospital.	Remarks.
Miner	53	Victoria	Pulmonary tuberculosis	720	Silicosis ; second admission
Cinema operator	26	Western Australia	do. do.	114	Second admission
Door-keeper	37	England	Acute pulmonary T.B.	39	
Labourer	57	South Australia	Pulmonary tuberculosis	1,152	
Do.	40	do.	Acute pulmonary T.B.	6	
Aboriginal	23	Australia	T.B. bones	4	Second admission ; amyloid degeneration
No occupation	47	Victoria	Pulmonary tuberculosis	83	
Coal miner	60	do.	do. do.	77	Haemoptysis.
Umbrella-maker	20	Western Australia	do. do.	103	Laryngeal ; second admission.
Domestic	40	Victoria	do. do.	66	
Farmer	30	Ireland	do. do.	507	Chronic nephritis.
Domestic	27	Greece	do. do.	1,026	
Labourer	30	Western Australia	do. do.	570	
Miner	45	Victoria	do. do.	5	Laryngeal ; silicosis.
Motor salesman	42	South Australia	do. do.	52	Intestinal and laryngeal T.B.
Miner	67	Victoria	do. do.	361	Silicosis.
Labourer	24	do.	do. do.	102	Diabetes mellitus.
No occupation	21	Western Australia	do. do.	63	Laryngeal ; second admission.
Engineer	39	England	do. do.	283	Laryngeal.
Carpenter	26	Finland	do. do.	185	
No occupation	24	England	do. do.	162	Laryngeal ; second admission.
Domestic	50	Victoria	do. do.	136	
Orderly	28	Scotland	do. do.	39	Laryngeal
Miner	69	Victoria	do. do.	31	Silicosis ; second admission.
Taxi-driver	34	England	Acute pulmonary T.B.	19	
Domestic	35	do.	Disseminated sclerosis	49	
Clerk	39	do.	Pulmonary tuberculosis	22	
Miner	62	Victoria	do. do.	83	Silicosis.
Do.	41	New South Wales	do. do.	538	do.
Do.	64	Victoria	Aortic disease heart	17	Silicosis ; T.B.
Brush-finisher	22	England	Pulmonary tuberculosis	228	
Boardinghouse-keeper	43	South Australia	do. do.	531	
Domestic	62	Victoria	do. do.	70	
Tea planter	72	Scotland	Cerebral thrombosis	3,239	
Miner	68	Victoria	Pulmonary tuberculosis	262	Silicosis.
Domestic	48	France	Syphilis of lung	935	
No occupation	24	Western Australia	Pulmonary tuberculosis	19	Five readmissions, also other sanatoria.
Domestic	33	Victoria	do. do.	44	
Miner	56	do.	do. do.	1,428	Silicosis.
Railway clerk	51	New South Wales	do. do.	1,640	
Labourer	71	Ireland	do. do.	1,054	T.B. nephritis ; second admission.
Miner	70	England	Chronic myocarditis	123	
Bricklayer	25	Scotland	Acute pulmonary T.B.	18	Laryngeal T.B.
Miner	53	Italy	Pulmonary tuberculosis	599	Silicosis
Accountant	52	England	do. do.	2,153	
Miner	53	Victoria	do. do.	356	Second admission.
Do.	62	do.	Gangrene of lung	2	Silico tuberculotic.
Do.	48	Italy	Pulmonary tuberculosis	141	Silicosis.
Pensioner	70	Victoria	do. do.	8	
Soldier	34	Italy	General T.B. bones and lungs	870	Result of war wounds.
Domestic	29	England	Pulmonary T.B.	680	
Miner	53	South Australia	do. do.	513	Silicosis ; four admissions, myocarditis.
Clerk	29	India	Valvular disease of heart	102	Pulmonary T.B. ; T.B. meningitis.
Labourer	29	England	Pulmonary T.B.	267	T.B. nephritis.
Aboriginal	30	Western Australia	do. do.	306	

1932.

In Sanatorium, 1st January	131
Admitted	219
Discharged	127
Deaths	55
Remaining in hospital	168

AGE INCIDENCE :—

	Males.	Females.
1—15	2	4
16—20	5	17
21—25	26	16
26—30	26	21
31—35	28	17
36—40	16	6
41—45	25	4
46—50	21	7
51—55	28	8
56—60	27	2
61—80	37	6

Difference in figures represents readmissions.

DISCHARGES :—

——	Males.			Females.		
	Total.	Stationary.	Progressive.	Total.	Stationary.	Progressive.
1st Stage	19	16	3	13	13	...
2nd Stage	10	10	...	14	12	2
3rd Stage	32	22	10	17	8	9
	Others: T.B. knee, cardiac, bronchiectasis, cancer of lung. No apparent disease after investigation (8).			Others: Bronchiectasis (2), bronchial asthma, syphilis. No apparent disease after investigation (5).		

OCCUPATIONS :—

Males.

Miners	47
Labourers	55
Farming	31
Engineering	19
Shop assistants	15
Clerical	12
Railway employees	9
Stewards and barmen	7
Carpenters	4
Wood-cutters	4
Cooks and baker	4
Lumpers	2
Seamen	2
Builders	2
Commercial travellers	2
Hospital attendants	2
Smelter, policeman, leather-dresser, fisherman, umbrella-maker, iron-dresser, printer, piano-tuner, tailor, caretaker, teacher; others no occupation; pensioners, etc.	

Females.

Domestic	79
Dressmakers	5
Shop assistants	4
Clerical	4
Laundresses	3
Nurses	3
Canvasser	1
School	2
Aboriginals	7
Others no occupation	

DEATHS—1931.

Occupation.	Age.	Native of	Cause of Death.	No. Days in Hospital.	Remarks.
Domestic	38	Western Australia	Pulmonary tuberculosis	205	
Do.	53	England	Carcinoma of lung	33	
Do.	24	Western Australia	Pulmonary tuberculosis	31	Laryngeal T.B.
Do.	40	England	do. do.	29	
Miner	60	Ireland	do. do.	253	Spontaneous pneumothorax.
Contractor	40	Tasmania	do. do.	134	
Cook	43	England	do. do.	189	
Domestic	56	do.	do. do.	19	
Do.	33	Western Australia	do. do.	107	
Shearer	67	England	do. do.	332	
Schoolmaster	43	do.	Spinal and general T.B.	107	
Miner	56	Victoria	Pulmonary tuberculosis	51	Silicosis.
Invalid pensioner	59	do.	do. do.	108	Rheumatoid arthritis.
Labourer	26	Scotland	Acute pulmonary T.B.	69	Laryngeal.
Mattress maker	41	South Australia	Chronic pulmonary T.B.	32	
Miner	65	England	Pulmonary tuberculosis	596	Silicosis.
Labourer	46	do.	do. do.	442	Lingual and laryngeal T.B.
Aboriginal	21	Australia	Acute pulmonary T.B.	16	
Miner	71	England	Pulmonary tuberculosis	5,084	Silicosis.
Fitter	50	South Australia	do. do.	857	Two previous admissions.
Group settler	34	England	do. do.	135	Laryngeal and pharyngeal T.B.
Domestic	31	Western Australia	do. do.	243	
Miner	60	New Zealand	do. do.	349	Silicosis.
School	15	Western Australia	do. do.	422	
Domestic	53	do.	Myocarditis specific	172	Not T.B.
Do.	22	do.	Pulmonary tuberculosis	187	
Labourer	73	England	Chronic pulmonary T.B.	85	
Miner	63	Victoria	Pulmonary tuberculosis	482	Silicosis.
Ice-carter	22	Western Australia	do. do.	376	
Domestic	45	Victoria	do. do.	82	Hæmoptysis.
Do.	35	Western Australia	do. do.	266	
Labourer	28	do.	do. do.	127	Second admission.
Wood-cutter	46	Italy	do. do.	233	
Lumper	59	Sweden	do. do.	4	Second admission
Wood-cutter	28	Jugo-Slavia	do. do.	214	
Chef	47	England	do. do.	690	
Farm-hand	43	do.	Acute pulmonary T.B.	50	Laryngeal T.B.
Domestic	19	Western Australia	do. do.	136	do. do.
Engineer	28	England	Pulmonary tuberculosis	155	Hæmoptysis.
Miner	44	New Zealand	do. do.	85	Silicosis.
Domestic	45	Victoria	do. do.	122	Second admission .
Plumber	23	England	do. do.	384	
Teamster	34	U.S.A.	do. do.	1,341	
Clerical	53	England	do. do.	448	T.B. thoracic wall.
Pensioner	63	Western Australia	do. do.	2	
Greengrocer	23	Greece	do. do.	124	Second admission.
Miner	59	Western Australia	do. do.	48	
Domestic	17	Do.	do. do.	100	
Tractor-driver	28	England	do. do.	721	Laryngeal T.B.
Domestic	22	W.A.	do. do.	81	do. do.
Kangaroo hunter	37	do.	do. do.	63	
Domestic	63	England	do. no.	20	Diabetes mellitus.
Miner	58	do.	do. do.	203	Silicosis ; second admission.
Truck-driver	23	Norway	do. do.	15	
No occupation	26	England	do. do.	212	
Do.	71	South Australia	do. do.	173	
Domestic	21	Western Australia	do. do.	267	Second admission.
Labourer	55	England	do. do.	1	do.
Miner	66	New South Wales	do. do.	381	Silicosis ; second admission.
Teacher, female	32	Western Australia	do. do.	187	

DEATHS—1931—*continued.*

Occupation.	Age.	Native of :	Cause of Death.	No. Days in Hospital.	Remarks.
Domestic	75	England	Pulmonary tuberculosis	26	
Miner	57	Victoria	do. do.	42	Silicosis.
Labourer	32	do.	do. do.	44	Laryngeal ; second admission.
Wood-cutter	35	Jugo-Slavia	do. do.	244	
Farmer	54	Victoria	do. do.	15	Cardiac.
Painter	68	Scotland	do. do.	2	Laryngeal.
No occupation	45	Victoria	Carcinoma of lung	37	Secondary deposits.
Engineer	40	do.	Pulmonary tuberculosis	71	
Printer	31	Scotland	Chronic peritonitis	265	Hydrothorax.
Railway employee	55	Victoria	Pulmonary tuberculosis	281	
Labourer	50	South Australia	do. do.	732	
Fruiterer	38	Victoria	do. do.	618	
No occupation	50	New Zealand	do. do.	102	Second admission.
Caretaker	34	Western Australia	do. do.	92	Laryngeal.
Miner	57	New South Wales	do. do.	2	Silicosis.
No occupation	69	Victoria	do. do.	196	
Shop assistant	50	do.	do. do.	40	Second admission.
Market gardener	55	Canada	do. do.	6	
Railway employee	20	Western Australia	do. do.	227	Laryngeal T.B. : second admission.

1931.

In Sanatorium, 1st January	152
Admitted	216
Discharged	158
Deaths	79
Remaining in Sanatorium	131

Age Incidence :—

	Males.	Females.
1—15	...	2
16—20	4	15
21—25	25	22
26—30	26	23
31—35	25	17
36—40	21	18
41—45	18	8
46—50	20	8
51—55	30	7
56—60	28	1
61—65	1	1
66—80	30	7
	228	129

Discrepancy in total represents re-admissions.

DISCHARGES :—

—	Males.			Females.		
	Total.	Stationary.	Progressive.	Total.	Stationary.	Progressive.
1st Stage	13	11	2	24	17	7
2nd Stage	15	13	2	20	14	6
3rd Stage	41	25	16	25	15	10

Others :—Bronchitis, bronchiectasis, pulmonary fibrosis, subphrenic abscess, initial valvular disease, chronic fibroid asthma. Others no apparent disease after investigation.	Others :—T.B. spine, T.B. pelvis, fibrosis of lungs, bronchitis, syphilis of lungs, congenital syphilis of lungs, bronchiectasis. Others no apparent disease after investigation.

NOTE.—Those discharged as *Stationary* indicate that no evidence of present active disease is present, that is "apparent arrest," and also cases which under ordinary circumstances should continue to improve to a condition of arrest. Too often such cases are claimed as cures.

It is my considered opinion that infinite harm is done by claiming temporary arrests as cures, when actual permanent healing is a matter of years.

Progressive indicates that patient has been discharged at his own request, that there has been advance of the pulmonary condition, and continued retrogression has to be expected.

1931.

OCCUPATIONS :—

Males.		Females.	
Miners	54	Domestic duties	83
Labourers	59	Shop assistants	6
Farming, includes pastoral, shearing & gardening	31	Clerical	5
Engineering, includes firemen, engine-drivers, mechanics and fitters	16	Waitress	2
Shop assistants	12	Teachers	2
Clerical	12	Nurses	2
Barmen and stewards	6	Dressmakers	2
Carpenters	5	Aboriginals	4
Wood-cutters	4	School	1
Horse-drivers	4		
Railway employees	3		
Lumpers	3		
Caretakers	3		
Hawkers	2		
Plumbers	2		
Cooks	2		
Policeman, printer, tailor, umbrella-maker, mattress-maker, schoolmaster, butcher, contractor, hospital attendant, fisherman, seaman, painter, etc.			

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